

**PROJECT DESCRIPTION**

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION MD 2 (RITCHIE HIGHWAY) AND 5TH AVENUE IN ANNE ARUNDEL COUNTY, MARYLAND. MD 2 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 2 APPROACHES OPERATING CONCURRENTLY AND THE 5TH AVENUE/MEDICAL CENTER ENTRANCE APPROACHES OPERATING SPLIT.

EXCLUSIVE LEFT-TURN PHASING IS PROVIDED FOR NORTHBOUND AND SOUTHBOUND MD 2 APPROACHES.

AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS THE SOUTH LEG OF MD 2 AND PEDESTRIAN INDICATIONS ARE PROVIDED ACROSS THE WEST LEG OF 5TH AVENUE AND THE MEDICAL CENTER ENTRANCE.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

MD 2 (RITCHIE HIGHWAY) AND 5TH AVENUE (PUSHBUTTON #36) - SOUTH LEG

INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS RITCHIE AT 5TH. CROSSWALK ANGLES LEFT. WAIT." \*\*

WALK: RAPID TICK

MD 2 (RITCHIE HIGHWAY) AND 5TH AVENUE (PUSHBUTTON #37) - SOUTH LEG MEDIAN

INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS RITCHIE AT 5TH. CROSSWALK ANGLES LEFT. WAIT." \*\*

WALK: RAPID TICK

MD 2 (RITCHIE HIGHWAY) AND 5TH AVENUE (PUSHBUTTON #38) - SOUTH LEG MEDIAN

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS RITCHIE AT 5TH. WAIT." \*

WALK: RAPID TICK

MD 2 (RITCHIE HIGHWAY) AND 5TH AVENUE (PUSHBUTTON #39) - SOUTH LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS RITCHIE AT 5TH. WAIT." \*

WALK: RAPID TICK

5TH AVENUE AND MD 2 (RITCHIE HIGHWAY) - WEST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS 5TH AT RITCHIE. WAIT." \*

WALK: RAPID TICK

5TH AVENUE AND MD 2 (RITCHIE HIGHWAY) - WEST LEG

STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS 5TH AT RITCHIE. WAIT." \*

WALK: RAPID TICK

MEDICAL CENTER ENTRANCE AND MD 2 (RITCHIE HIGHWAY) - EAST LEG

INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS ENTRANCE AT RITCHIE. CROSSWALK ANGLES RIGHT. WAIT." \*\*

WALK: RAPID TICK

\* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS < 10'  
 \*\* MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CABINET AND CONTROLLER WILL BE USED. THE CONTROLLER WILL BE RETROFITTED TO OPERATE VIDEO DETECTION EQUIPMENT AND APS EQUIPMENT.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.04-01 (SHOULDER WORK)      STANDARD NO. MD-104.02-13 (INTERSECTION FLAGGING OPERATION)  
 STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE)  
 STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)      STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. KIMBERLY TRAN  
 ASSISTANT DISTRICT ENGINEER - TRAFFIC  
 PHONE: (410) 841-1019

MR. MIKE HUBER  
 DISTRICT UTILITY ENGINEER  
 PHONE: (410) 841-1039

MR. JOHN S. MAYS  
 ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
 PHONE: (410) 841-1013

MS. CORREN JOHNSON  
 CHIEF, TRAFFIC OPERATIONS DIVISION  
 PHONE: (410) 787-7630

**EQUIPMENT LIST "A"**

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
900000	1 EACH	CONTROLLER CABINET, SIZE "S" W/CTRL, VIDEO INT, 1-8 CAM
900000	1 EACH	4 CHANNEL DETECTOR AMPLIFIER
900000	95 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF (POLE MOUNT) :
	- 2 EACH	D-3(1) SIGN (VARIABLE x 16 IN.) DUAL FACED - MAST ARM MOUNT
	- 2 EACH	M1-5(4) (78 IN. x 36 IN.) - MAST ARM MOUNT
	- 1 EACH	R3-5(R) (30 IN. x 36 IN.) - MAST ARM MOUNT
	- 1 EACH	R3-6(R) (30 IN. x 36 IN.) - MAST ARM MOUNT
	- 1 EACH	R10-11b (30 IN. x 30 IN.) - MAST ARM MOUNT
	- 4 EACH	R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS RITCHIE HIGHWAY"
	- 2 EACH	R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS 5TH AVENUE"
	- 2 EACH	R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS ENTRANCE"

**EQUIPMENT LIST "C"**

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

**EQUIPMENT LIST "B"**

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

CATEGORY CODES	QUANTITY	DESCRIPTION
100000	1 EACH	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
203030	8 C.Y.	TEST PIT EXCAVATION
201032	3 C.Y.	CLASS 2 EXCAVATION
585621	735 L.F.	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	160 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED
585700	820 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
600000	205 L.F.	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	85 L.F.	TYPE A CURB AND GUTTER ANY HEIGHT OR DEPTH
655105	1400 S.F.	5 IN. CONCRETE SIDEWALK
655120	106 S.F.	DETECTABLE WARNING SURFACE FOR CURB RAMPS
704345	5 S.Y.	PLACING FURNISHED TOPSOIL 4 INCH DEPTH
708220	5 S.Y.	TURFGRASS SOD ESTABLISHMENT
800000	1 EACH	2-WIRE CENTRAL CONTROL UNIT
800000	1 EACH	ADJUST HANDHOLE TO GRADE WITH NEW FRAME AND COVER
800000	2 EACH	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH LED ROADWAY LUMINAIRE
800000	8 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION
800000	6 EACH	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	4 EACH	IP-BASED VIDEO DETECTION CAMERA & ANY LENGTH LEAD-IN CABLE
800000	7 EACH	5 FT. OR 10 FT. PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION AND GROUND ROD
800000	1 EACH	PEDESTAL POLE (ANY SIZE LARGER THAN 10 FT.) WITH BREAKAWAY TRANSFORMER BASE, FOUNDATION AND GROUND ROD
800000	1 EACH	TWIN MAST ARM POLE & 50 FT. /50 FT. MAST ARMS ANY 'T' DIMENSION, FOUNDATION AND GROUND ROD
800000	1 EACH	TWIN MAST ARM POLE & 50 FT. /60 FT. MAST ARMS ANY 'T' DIMENSION, FOUNDATION AND GROUND ROD
800000	1 EACH	100 AMP EMBEDDED METERED SERVICE PEDESTAL, CONCRETE COLLAR AND GROUND RODS
800000	4 EACH	NONINVASIVE DETECTOR WITH ANY LENGTH LEAD IN CABLE UP TO 1000'
800000	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT (PER INTERSECTION)
800000	1 EACH	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE) INCLUDING F&I FOUNDATION AND GROUND ROD
800000	500 L.F.	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 12 AWG) (B,W,G) TYPE TC
800000	2500 L.F.	12-PAIR COMMUNICATION CABLE, SELF-SUPPORTING, JELLY-FILLED/UNDERGROUND
800000	600 L.F.	DISCONNECT, PULL BACK AND REROUTE EXISTING CABLES
800000	575 L.F.	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED OR SLOTTED
800000	2010 L.F.	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
800000	68 L.F.	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
800000	95 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGNS (INCLUDING ALL HARDWARE)
802501	685 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810022	105 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
811001	19 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813023	68 S.F.	RELOCATE EXISTING GROUND MOUNTED SIGNS
860284	42 EACH	12 IN. LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860292	3 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
861105	1550 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861106	2200 L.F.	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)
861107	1155 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	1850 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)

**SHA** STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF TRAFFIC & SAFETY  
 TRAFFIC ENGINEERING DESIGN DIVISION  
 MD 2 (Ritchie Highway) and 5th Avenue  
 Glen Burnie, MD

**WR&A**  
**WHITMAN, REQUARDT & ASSOCIATES, LLP**  
 801 South Caroline Street, Baltimore, Maryland 21201

**GENERAL INFORMATION SHEET**

SCALE NONE ADVERTISED DATE 5/31/2013 CONTRACT NO. XY1515185

DESIGNED BY S. Bloss COUNTY Anne Arundel  
 DRAWN BY S. Bloss LOGMILE 02000235.98  
 CHECKED BY N. Leary TMS NO. L826  
 F.A.P. NO. \_\_\_\_\_ TOD NO. \_\_\_\_\_

TS NO. 802E DRAWING **TSP-5** OF 5 SHEET NO. 5 OF 5

BY: sbloss